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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/478,168	01/05/2000	Michael Meyer	34645-00488USPX	1323

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ERICSSON INC.  
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EXAMINER

BLOUNT, STEVEN

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/478,168

Applicant(s)

Meyer

Examiner

Blount

Group Art Unit

2661

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 10-1-03
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-3, 6-7, 9-13, 15, 17-18, 35-49 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-3, 6-7, 9-13, 17-18, 35-49 is/are rejected.
- ☒ Claim(s) 15 is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 - 3, 6 - 7, 9 - 13, 17 - 18, and 35 - 49 are rejected under 35 U.S.C. 103(a) as being obvious over Applicants Admitted Prior Art (hereinafter AAPA) in view of U.S. patent 5,974,028 to Ramakrishnan.

With regard to claim 1, AAPA teaches (see page 2) dividing the data into a plurality of units and sending them from the sender to the receiver, sending acknowledgements (page 1), detecting failure and retransmitting (page 2 par. 2). AAPA also teaches problems associated with congestion, where a congestion window "is intended to take into account the congestion along the connection between the sending peer and receiving peer" (page 4, 4th paragraph). AAPA teaches that "In TCP, the time-out response consists in retransmitting the data that was sent (page 2, lines 11+).

AAPA does not however teach using an adaptive parameter which acts as a flow control procedure including the steps of 1) performing an excessive delay response procedure upon determining that at least one data unit was correctly received and, together with 2) performing a

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data unit loss response procedure upon determining that the received acknowledgment data indicates the at least one data unit was correctly received as a result of the retransmitting step.

Ramakrishnan teaches solutions to the problem associated with situations involving both congestion in the system, and where packets are being retransmitted due to errors in the packets:

“The present invention avoids sending duplicate acknowledgments and invoking a congestion mechanism when packets are received with bit errors due to the lossy link and not due to congestion. If congestion, however, is a source of error over links other than the wireless link, acknowledgments indicate that congestion that congestion is the source of error and that it would be appropriate for this system to invoke congestion mechanisms.” (Col 3, lines 20+). Further, Ramakrishnan teaches 1) invoking congestion control mechanisms as described in col 6, lines 28+ “where packet 34 is not received at all due to congestion” and 2) performing a data loss response procedure in response to *the equivalent of a retransmitting step*, IE, the sending of selective acknowledgment packets as described in col 4 lines 55+ and col 1 lines 55+ (note the discussion above with respect to AAPA, where it is noted that AAPA teaches retransmission).

Kapoor teaches that congestion may be due to late (IE, correctly received) or dropped packets (as mentioned in Ramakrishnan). See column 2, lines 20+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided AAPA with a mechanism for implementing a response to both excessively delayed packets and retransmitted packets, in light of the teachings of Ramakrishnan and Kapoor, in order to provide a system which has proper flow control.

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With regard to claim 2, a timer (inherent in the timeout period) is mentioned in col 5 lines 4+;

with regard to claim 3, duplicate data units and the fact that they signal failure is taught in page 5, second paragraph of AAPA;

With regard to claim 6, time out is taught in col 5, lines 7+;

With regard to claim 7, sliding window flow control is taught in AAPA, page 3, second paragraph;

With regard to claims 9 - 10, marking data units in the SACK is taught in col 7, lines 58+, and it would be obvious to do this to both the packets sent and those received;

With regard to claims 11 and 13, having a bit string used to do this as opposed to a bit (see above) is an obvious variation;

With regard to claim 12, note that Ramakrishnan teaches the use of a single bit;

With regard to claim 17, see the description of the timeout period in column 6, lines 29+;

With regard to claim 18, see the description of the windowing procedure in AAPA;

With regard to claims 35 - 47, the apparatus limitations are all present in the method claims described above;

With regard to claims 48 - 49, see the rejection of claim 1 above, where adaptive flow control is taught to be carried out using windowing (AAPA), sending SACK packets with a bit map (Ramakrishnan, col 4 lines 58+) in combination with a timer, and also the use of SACK

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packets as taught in col 7, lines 55+, and note the discussion of the method of responding to congestion in col 6, lines 13+.


3. Applicants arguments are deemed moot in view of the new grounds of rejection.
4. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

SB

  
12/8/03

  
**Ajit Patel**  
**Primary Examiner**